Contribution ID: **543** Type: **Poster Presentation**

Synthesis and magnetic properties of Mg1-xZnxFe2O4 nanoferrites

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Abstract content
   (Max 300 words)

Mg1-xZnxFe2O4 nanoparticles (0<x<1 in steps of 0.1) have been produced by centrifugation using the low temperature glycol-thermal method at 200 C. Single-phase formation was confirmed by X-ray powder diffraction which revealed a well-defined cubic spinel structure with space group Fd3m. The crystallite size of the compounds ranged from 10.6-22.2 nm. A strong correlation was found between X-ray density and Zn-concentration (x). The magnetic properties as a function were investigated by using a 57Fe Mössbauer spectroscopy and magnetization measurements using vibration sample magnetometer at room temperature. The results show Zn-concentration induced transformation from paramagnetic state to magnetic ordered for x<0.8 for the studied nanosized samples.

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 considered for a student
   award (Yes / No)?

No

Level for award
 (Hons, MSc,
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N/A

Main supervisor (name and email)
and his / her institution

N/A

Would you like to <br> submit a short paper <br> for the Conference
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Yes

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